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EXAMINER

DIVECHA, KAMAL B

ART UNIT PAPER NUMBER

2151

DATE MAILED: 02/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/870,302

Applicant(s)

RACIBORSKI ET AL.

Examiner

KAMAL B. DIVECHA

Art Unit

2151

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Arguments

Claims 1-19 are pending in this application.

The applicant in response filed January 18, 2006 has canceled claim 20.

Claim Rejections - 35 USC § 112

The 35 USC 112, first and second paragraph rejections presented in prior office action have been withdrawn.

Claim Rejections - 35 USC § 102

Applicant's arguments filed January 18, 2006 have been fully considered but they are not persuasive.

Examiner summarizes the applicants arguments presented in response filed on January 18, 2006 and addresses each argument individually.

As per applicant's arguments filed on January 18, 2006, the applicant argues in substance that:

- a. Gurijala does not disclose a content exchange, receiving from an origin server, i.e. the web server, a predetermined period of time associated with at least one of the content objects and indicating a time for which that content object will be stored in the content store (remarks, page 9).

In response to [a]: Examiner disagrees in light of the following:

Applicant specification (page 15 lines 6-15) states:

“The content store 412 holds the content objects available for download to the client computers 112 from that content exchange 116. The name of the origin server 108 providing the content object along with path information and the filename is stored with the content object in the content store 412. Via the Internet 120, the

Art Unit: 2151

client computers 112 connect to the content store 412 and download the content object file or data stream. As new content objects are added to the content store 412, old content objects are removed. **The age of a content object relates to the last time a content object was accessed.** Some content objects on the store 412 never age such that they stay in the store for a predetermined time. An origin server 108 could arrange for the content exchange 112 to store a content object for a predetermined period of time”.

First, applicant’s specification fails to provide a support for the applicant’s argument and the recited limitation.

On the other hand, Gurijala discloses the process of receiving the identity of WCS (i.e. origin servers), the URI of the object, and **the time at which the WCS downloaded the object** (a predetermined period of time associated with content). And further, in another embodiment of the operation, a date and time stamp for the object is downloaded with the object and provided to CNS (content exchange apparatus).

Gurijala discloses similar process as described by the applicant’s specification. Gurijala teaches the process wherein the over-aging criteria (i.e. criteria to determine deletion of the content or an indication of a time for which the content will be stored in the content) includes the actual age of the object, the time since the object (i.e. content) was downloaded, **the time since any serviced WC accessed the object** (i.e. the age of content relates to the last time a content object was accessed, col. 6 L50-62, according to applicant). Gurijala further teaches the process of indicating a time for which the content object will be stored in the content store (col. 7 L29-42).

- b. The office action does not establish a prima facie case of obviousness in rejecting claims 2-4, 9-14 (remarks, page 9).

In response to [b]: Examiner disagrees because the office action has presented a proper prima facie case. The office action has explicitly addressed all the requirements for establishing a proper prima facie case, i.e. some suggestion or motivation to modify the references, reasons of such a modification and a teaching or suggestion in the cited prior art (see the detailed action below).

Therefore for the at least reasons set forth above, the rejection is maintained.

DETAILED ACTION

Specification

The specification is objected to under 35 U.S.C. § 112, first paragraph, as failing to adequately teach how to make and use the invention, i.e., failing to provide an enabling disclosure.

The test to be applied under the written description portion of 35 U.S.C. § 112, first paragraph, is whether the disclosure of the application as originally filed reasonably conveys to the artisan that the inventor had possession at that time of later claimed subject matter. Vas-Cat, Inc. v. Mahurkar, 935 F. 2d 1555, 1565, 19 USPQ2d 111, 1118 (Fed. Cir. 1991), reh'rg denied (Fed. Cir. July 8, 1991) and reh'rg, en banc, denied (Fed. Cir. July 29, 1991).

The applicants have failed to provide an enabling disclosure in the detailed description of the embodiment. The specification is objected to under 35 U.S.C. § 112, first paragraph, as failing to support the subject matter set forth in these claims.

The claims recite the limitation “a content store comprising a plurality of content objects, each content object originating from one of plurality of origin servers and **wherein the content exchange apparatus is configured to receive from at least one of the origin servers a**

Art Unit: 2151

predetermined period of time associated with at least one of the content objects and indicating a time for which that content object will be stored in the content store...” however, the specification merely describes a content exchange apparatus for caching content objects including a content store, a content tracker, an origin server database, and a catalog of content objects. A determination is made by the content tracker as to which content objects are stored in the content store. The origin server database includes a list of origin servers associated with the content exchange (see Abstract and summary).

Further applicant cited the paragraph on page 15 lines 6-15 for finding the support for the aforementioned limitation, however the specification simply states:

“The content store 412 holds the content objects available for download to the client computers 112 from that content exchange 116. The name of the origin server 108 providing the content object along with path information and the filename is stored with the content object in the content store 412. Via the Internet 120, the client computers 112 connect to the content store 412 and download the content object file or data stream. As new content objects are added to the content store 412, old content objects are removed. **The age of a content object relates to the last time a content object was accessed.** Some content objects on the store 412 never age such that they stay in the store for a predetermined time. An origin server 108 could arrange for the content exchange 112 to store a content object for a predetermined period of time”.

There is no indication whatsoever or any teaching regarding the recited limitation “...wherein the content exchange apparatus is configured to receive from at least one of the origin servers a predetermined period of time associated with at least one of the content objects and indicating a time for which that content object will be stored in the content store”. Hence the amended subject matter and/or limitation is not supported by the specification and was not

Art Unit: 2151

described in the specification in such a way as to reasonably enable one of ordinary skilled in the art to make and use the invention.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

1. Claims 1-19 are rejected under 35 U.S.C. 112, first paragraph, for the same reasons as set forth in objection to specification.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 5-8, and 15-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Gurijala et al. (hereinafter Gurijala, USPN 6,601,090).

As per claim 1, Gurijala explicitly discloses a content exchange system for caching content objects, the content exchange apparatus comprising: a content store comprising a plurality of content objects, each content object originating from one of a plurality of origin servers (column 4, lines 64-67) and wherein the content exchange apparatus is configured to receive from at least one of the origin servers a predetermined period of time associated with at

Art Unit: 2151

least one of the content objects and indicating a time for which that content object will be stored in the content store (column 6 lines 22-62 and column 7 lines 29-42); a content tracker that determines the content objects stored in the content store and configured to receive identifiers directly from the plurality of origin servers (column 4, lines 51-53; column 5, lines 42-50); an origin server database comprising a list of the origin servers identified to the content tracker by the respect origin server (column 5, lines 42-50; column 6, lines 36-39); and a catalog of content objects stored in the content store (column 5, lines 1-4, 45-49; column 6, lines 36-39).

As per claim 5, Gurijala discloses the system wherein the content store is divided into a first section and a second section (column 6, lines 4-15, 50-62, note that the content store may have any number of logically separations for maintaining data); the first section comprises a cache where les frequently requested content objects are purged in favor of more frequently requested content objects (column 6, lines 4-15, 50-62); the second section comprises a file system where content objects remain stored in the content store for a period of time regardless of request frequency (column 6, lines 4-15, 50-62).

As per claim 6, Gurijala discloses the system comprising a content controller, wherein the content controller finds a requested content object not presently retained in the content store (column 5, lines 25-40).

As per claim 7, Gurijala discloses a system comprising a content controller and wherein the content controller finds a requested content object not presently retained in the content store on one of: another content exchange and the origin server (column 5, lines 25-40).

As per claim 8, Gurijala discloses a system comprising information repository comprising status information related to the content exchange (column 5, lines 42-50; column 6, lines 3639).

As per claim 15, Gurijala discloses a method for caching content objects in a content exchange comprising: storing content objects obtained from an origin server by the content exchange (column 4, line 67); receiving information about the origin server directly from the origin server (column 5, lines 45-50); storing the information in a database (column 6, lines 36-38); determining a network address for the origin server using the database (column 5, lines 45-50); and contacting one of the origin server and another content exchange when a content object request results in a cache miss (column 5, lines 25-41).

As per claim 16, Gurijala discloses the process wherein the database comprises an origin server identifier and an origin server address for each associated origin server (column 5, lines 45-50; column 6, lines 36-38).

As per claim 17, Gurijala discloses the process wherein the storing step comprises a step of storing an origin server identifier and an origin server address for each associated origin server (column 5, lines 45-50; column 6, lines 36-38).

As per claim 18, Gurijala discloses the process wherein the determining step comprises a step of querying the database for an origin server address associated with a provided origin server identifier (column 5, lines 15-50).

As per claim 19, Gurijala discloses the process of determining if any other content exchange has at least a portion of the content object (column 5, lines 16-25); requesting the portion if the portion is found on any other content exchange (column 5, lines 16-50); requesting the portion from the origin server if the portion is not found on any other content exchange (column 5, lines 16-50).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 2-4 and 9-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gurijala et al. (USPN 6,601,090) in view of Chase (EP 0877326A2).

As per claim 9, Gurijala discloses a content storing system for caching content objects comprising: a first content exchange (figure 1); a second content exchange (figure 1); a content bus coupled to the first and second content exchanges (figure 1) wherein: the first content exchange comprises an origin server database comprising a list of origin servers identified to the content exchange directly by the respective origin server (column 5, lines 42-50; column 6, lines 3639); and the second content exchange comprises a content store comprising a plurality of content objects, each content object originating from one of the plurality of origin servers and

wherein the second content exchange is configured to receive from at least one the origin servers a predetermined period of time associated with at least one of the content objects and indicating a time for which that content object will be stored in the content store (column 6, lines 22-62 and column 7, lines 29-42).

However, Gurijala does not disclose a means wherein the list of origin servers contains a plurality of origin servers that have no content objects stored in the first content exchange.

Chase, from the same field of endeavor, explicitly discloses a system for distributed caching in a network wherein the list of origin servers contains a plurality of origin servers that have no content objects stored in the first content exchange (figure 4, note that the information sources notify the central processor when they come online regardless of their content).

Therefore, it would have been obvious to a person of ordinary skilled in the art at the time the invention was made to modify Gurijala in view of Chase, in order to include a list of origin servers containing a plurality of origin servers that have no content objects stored in the first content exchange, since Chase is evidenced to teach such a limitation.

One of ordinary skilled in the art would have been motivated because, by employing the inclusion of servers in the origin server lists even if no content data is stored from those servers, would have benefited the system by allowing information on frequently used servers to be saved even if no recent downloads have resulted in content being stored.

As per claim 10, Gurijala's teaching as set forth above still applies, however Gurijala does not disclose the process wherein the list of origin servers is modified to exclude a particular origin server when a determination is made that the particular origin server is no longer available. Chase, from the same field of endeavor, discloses the system for distributed caching, a

Art Unit: 2151

network wherein the list of origin servers is modified to exclude a particular origin server when a determination is made that the particular origin server is no longer available (figure 4, element 400). Therefore it would have been obvious to a person of ordinary skilled in the art at the time the invention was made to incorporate the teaching of Chase with Gurijala, in order to modify the list of servers to exclude a particular origin server when the particular origin server is no longer available. One of ordinary skilled in the art would have been motivated because by employing the omission of origin servers from a server list when the origin server is no longer available would have benefited the system by stopping clients from trying to access unavailable servers and wasting computing time and network bandwidth.

As per claim 11, Gurijala's teaching as set forth above still applies, however Gurijala does not disclose the means wherein content objects associated with a particular origin server are removed from the content store when a determination is made that the particular origin server is no longer available. Chase, from the same field of endeavor, discloses a system for distributed caching a network wherein content objects associated with a particular origin server are removed from the content store when a determination is made that the particular origin server is no longer available (figure 4, element 400). Therefore it would have been obvious to a person of ordinary skilled in the art at the time the invention was made to modify Gurijala in view of Chase, in order to employ a means for removal of a content object from the content store when the origin server is unavailable. One of ordinary skilled in the art would have been motivated because it would have benefited the system by ensuring that users do not access old information from a closed site that is no longer correct or available.

Art Unit: 2151

As per claim 12, Gurijala further discloses the system wherein the second content exchange is divided into a first section and a second section (column 6, lines 4-15, 50-62, note that the content store may have any number of logical separations for maintaining data); the first section comprises a cache where less frequently requested content objects are purged in favor of more frequently requested content objects (column 6, lines 4-15, 50-62); the second section comprises a file system where content objects remain stored in the content store for a period of time regardless of request frequency (column 6, lines 4-15, 50-62).

As per claim 13, Gurijala further discloses the system wherein the content bus transports a requested object not presently retained in the first content exchange from the second content exchange (column 7, lines 5-17).

As per claim 14, Gurijala further discloses the system wherein the content bus transports a requested content object not presently retained in the first content exchange from one of the second content exchange and an origin server (column 5, lines 25-40; column 7, lines 5-17).

As per claims 2-4, they do not teach or further define over the limitations in claims 9-14. Therefore, claims 2-4 are rejected for the same reasons as set forth in claims 9-14.

Additional References

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- i. Zhang et al., U. S. Patent No. 6,553,409 B1: BACKGROUND CACHE SYNCHRONIZATION.
- ii. Ronstrom et al., U. S. Patent No. 6,263,402 B1: DATA CACHING ON THE INTERNET.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KAMAL B. DIVECHA whose telephone number is 571-272-5863. The examiner can normally be reached on Increased Flex Work Schedule.

Art Unit: 2151

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zarni Maung can be reached on 571-272-3939. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kamal Divecha
Art Unit 2151
February 14, 2006.



ZARNI MAUNG
SUPERVISORY PATENT EXAMINER